AMENDMENTS TO THE CLAIMS

1 - 14 (Cancelled)

15. (Previously Presented) A continuously variable transmission comprising a housing, a pair of axially spaced cones rotatably arranged on a shared longitudinal axis of said housing, a pair of spaced apart countershafts relatively rotatable within said housing, said countershafts being mounted within said housing for limited, controlled movement therein, wherein each of said countershafts is adapted to be angularly pivoted within said housing and relative to one another, while axially translatable within said housing; each of said countershafts having defined first and second ends contained within said housing, wherein said first end of each countershaft has a greater diameter than said second end; said cones being positioned laterally intermediately between said countershafts; wherein the greater diameter first ends of said two countershafts are adapted to bear against and make rolling contact with one of said intermediately positioned cones, while said smaller diameter second ends of said two countershafts are adapted to bear against and make rolling contact with said second cone; and wherein an outer tube shaft supports one of said cones rigidly secured thereto, and a stepped diameter inner tube shaft supports the second of said cones, each respective tube shaft supported on a plurality of spaced pilot bearings.

16. (New) A continuously variable transmission comprising a housing, a pair of axially spaced cones rotatably arranged on a shared longitudinal axis of said housing, a pair of spaced apart countershafts relatively rotatable within said housing, said countershafts being mounted within said housing for limited, controlled movement therein, wherein each of said countershafts is adapted to be angularly pivoted within said housing and relative to one another, while axially translatable within said housing; each of said countershafts having defined first and second ends contained within said housing, wherein said first end of each countershaft has a greater diameter than said second end; said cones being positioned laterally intermediately between said countershafts; wherein the greater diameter first ends of said two countershafts are adapted to bear against and make rolling contact with one of said intermediately positioned cones, while said smaller diameter second ends of said two countershafts are adapted to bear against and make rolling contact with said second cone; each of said countershafts adapted to be controllably

moved both pivotally and translationally along separate but parallel axes for movement relative to said front input and rear output cones, wherein the larger major circle bases of said cones are supported by and rotate on thrust bearings; each of said countershafts includes a disk, respectively, that is rigidly secured to its respective shaft to define said first end of each countershaft having a greater diameter than said second smaller diameter end, each disk adapted to controllably engage various axially extending portions of the conical surface of said front input cone so as to provide infinitely variable gearing ratios between lowest and highest CVT input-output ratios; said opposed second smaller diameter end of each of said countershafts adapted to controllably engage various axially extending portions of the conical surface of said rear output cone so as to provide infinitely variable gearing ratios between lowest and highest CVT input-output ratios; said countershafts supported in trunnions for said pivotal and translational movements with respect to said housing, wherein said trunnions are supported in ball bearings rigidly secured to each countershaft, and wherein said bearings are supported for movement in spherical surfaces of bearing races fixed to said housing; said spaced apart countershafts and said disks fixed thereto and adapted to pivot and move translationally along said longitudinal axis by means of software controlled axial movements of said trunnions, wherein said trunnions are thereby moved uniformly together both pivotally and translationally; and further comprising an outer tube shaft supporting one of said cones rigidly secured thereto, and a stepped diameter inner tube shaft supporting the second of said cones, wherein each respective tube shaft is supported on a plurality of spaced pilot bearings.

17. (New) A continuously variable transmission comprising a housing, a pair of axially spaced cones rotatably arranged on a shared longitudinal axis of said housing, a pair of spaced apart countershafts relatively rotatable within said housing, said countershafts being mounted within said housing for limited, controlled movement therein, wherein each of said countershafts is adapted to be angularly pivoted within said housing and relative to one another, while axially translatable within said housing; each of said countershafts having defined first and second ends contained within said housing, wherein said first end of each countershaft has a greater diameter than said second end; said cones being positioned laterally intermediately between said countershafts;

wherein the greater diameter first ends of said two countershafts are adapted to bear against and make rolling contact with one of said intermediately positioned cones, while said smaller diameter second ends of said two countershafts are adapted to bear against and make rolling contact with said second cone;

wherein said first cone is a front transmission input cone, and wherein said second cone is a rear output cone; said cones having reversely oriented frustoconical cross-sections, each of said cones comprising a conical surface, a major circular base, and a smaller minor circular base, wherein said cones are positioned along said longitudinal axis in a manner such that their smaller circle bases are positioned proximally to one another, while their larger major circle bases are opposed to one another and define spaced extremities of said cones;

wherein each of said countershafts is adapted to be controllably moved both pivotally and translationally along separate but parallel axes for movement relative to said front input and rear output cones, and wherein the larger major circle bases of said cones are supported by and rotate on thrust bearings;

wherein each of said countershafts includes a disk respectively, wherein each disk is rigidly secured to its respective shaft to define said first end of each countershaft having a greater diameter than said second smaller diameter end, and wherein each disk is adapted to controllably engage various axially extending portions of the conical surface of said front input cone so as to provide infinitely variable gearing ratios between lowest and highest CVT input-output ratios;

wherein said countershafts are supported in trunnions for said pivotal and translational movements with respect to said housing, wherein said trunnions are supported in ball bearings rigidly secured to each countershaft, and wherein said bearings are supported for movement in spherical surfaces of bearing races fixed to said housing;

wherein said opposed second smaller diameter end of each of said countershafts is adapted to controllably engage various axially extending portions of the conical surface of said rear output cone so as to provide infinitely variable gearing ratios between lowest and highest CVT input-output ratios;

wherein said spaced apart countershafts and said disks fixed thereto and adapted to pivot and move translationally along said longitudinal axis, are adapted to do so by means of software controlled axial movements of said trunnions, wherein said trunnions are thereby moved uniformly together both pivotally and translationally; and further comprising an outer tube shaft supporting one of said cones rigidly secured thereto, and a stepped diameter inner tube shaft supporting the second of said cones, wherein each respective tube shaft is supported on a plurality of spaced pilot bearings.